

<b>Notice of Allowability</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/761,178	ITOH ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Dalena Tran	3661	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 4/7/06.
2. ☒ The allowed claim(s) is/are 1-3, 5-12(now renumbered as 1-11).
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

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|---|--|
| <ol style="list-style-type: none"> <li>1. <input type="checkbox"/> Notice of References Cited (PTO-892)</li> <li>2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)</li> <li>3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br/>Paper No./Mail Date _____</li> <li>4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br/>of Biological Material</li> </ol> | <ol style="list-style-type: none"> <li>5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)</li> <li>6. <input type="checkbox"/> Interview Summary (PTO-413),<br/>Paper No./Mail Date _____.</li> <li>7. <input type="checkbox"/> Examiner's Amendment/Comment</li> <li>8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance</li> <li>9. <input type="checkbox"/> Other _____.</li> </ol> |
|---|--|

*Dalena Tran*



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APPLICATION NO./ CONTROL NO.	FILING DATE	FIRST NAMED INVENTOR / PATENT IN REEXAMINATION	ATTORNEY DOCKET NO.
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10/761,178

EXAMINER
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ART UNIT	PAPER
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20060621

DATE MAILED:

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner for Patents

The drawing filed on 1/20/04, and 4/7/06 has been approved.

### **EXAMINER'S STATEMENT OF REASONS FOR ALLOWANCE**

1. This communication is an Examiner's reasons for allowance in response to application filed on 1/20/04, assigned serial 10/761178 and title "Automatic stop / start controller for engine".

2. The following is the Examiner's statement of reasons for the indication of allowable subject matter:

After carefully reviewing the application in light of the amended claims and the additional search of all the possible areas relevant to the present application, a set of related prior art references has been found, but those prior art references are not deemed strong to make the application unpatentable. Thus, it is found that the application is now in condition for allowance.

As per claim 1, the prior art of record does not disclose an automatic stop/start controller for a vehicle, wherein, at start of the engine without operation of the ignition key and after engine is started to drive by motor generator of which the amount of torque is variably set based on a determination as to whether the throttle opening angle is at an idle opening angle, the controller corrects to increase the torque generated by motor generator according to the degree of engagement of frictional drive engaging elements of automatic transmission, and starts the fuel supply to the engine when the degree of engagement of the frictional drive engaging elements exceeds a predetermined threshold. This limitation in combination with the other elements in the claim was not shown or suggested by the prior art.

As per claim 8, the prior art of record does not disclose a hybrid vehicle, comprising: an automatic stop/start controller for permitting starting and stopping of the

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engine without operation of an ignition key; the amount of torque generated by motor being variably set based on a determination as to whether the throttle opening angle is at an idle opening angle, controller increasing the torque generated by motor for supply to transmission according to the degree of engagement of a frictional engaging drive elements of automatic transmission, and starts the fuel supply to the engine when the degree of engagement of the frictional engaging drive elements exceeds a predetermined threshold. This limitation in combination with the other elements in the claim was not shown or suggested by the prior art.

As per claim 11, the prior art of record does not disclose a process for controlling the startup of an internal combustion engine, ignition key, comprising the steps of: energizing a motor to effect starting of engine without use of an ignition key; determining if the engine speed exceeds the transmission turbine speed by a predetermined reference amount; when the engine speed exceeds the turbine speed by less than predetermined differential, preventing the supply of fuel to the engine; then determining a motor torque value according to engine speed with reference to a motor torque table; then increasing the motor torque value according to either the idle or non-idle opening degree of the engine throttle; and then increasing the torque output of the motor in accordance with the increased motor torque value. This limitation in combination with the other elements in the claim was not shown or suggested by the prior art.

As per claim 12, the prior art of record does not disclose an automatic stop/start controller for a vehicle comprising an automatic transmission which includes frictional drive engaging elements which are engagable and disengagable to transmit torque from an engine and a motor generator to wheels of the vehicle, the degree of engagement of

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the frictional engaging elements being variable depending upon variations in oil pressure during starting and stopping of engine, the automatic stop/start controller permitting the engine to stop and start without operation of an ignition key, wherein, at start of the engine without operation of the ignition key and after engine is started to drive by motor generator, the amount of torque is variably set by the controller based on a determination as to whether the throttle opening angle is at an idle opening angle, and wherein the controller corrects to increase the torque generated by motor generator according to the degree of engagement of frictional drive engaging elements of automatic transmission which progressively reengage as the engine is started, and the controller starts the fuel supply to the engine when the degree of engagement of the frictional drive engaging elements exceeds a predetermined threshold. This limitation in combination with the other elements in the claim was not shown or suggested by the prior art.

Claims 1-3, and 5-12, are allowable over the prior art of record.

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dalena Tran whose telephone number is 571-272-6968. The examiner can normally be reached on M-F 6:30 AM-4:00 PM), off every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Black can be reached on 571-272-6956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Patent Examiner  
Dalena Tran

A handwritten signature in black ink, appearing to read 'Dalena Tran', followed by a horizontal line.

June 21, 2006